

Product datasheet for **SC127484**

Caldesmon (CALD1) (NM_033157) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caldesmon (CALD1) (NM_033157) Human Untagged Clone
Tag:	Tag Free
Symbol:	Caldesmon
Synonyms:	CDM; H-CAD; HCAD; L-CAD; LCAD; NAG22
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_033157, the custom clone sequence may differ by one or more nucleotides

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ATGGATGATTTTGGAGCGTCGCAGAGAAGCTTAGAAGGCCAAAAGAGGGAGGAGATGCGACTCGAAGCAGAAA
GAATCGCCTACCAGAGGAATGACGATGATGAAGAGGAGGCAGCCCGGGAACGGCGCCGAGCCCGACA
GGAACGGCTGCGGCAGAAGCAGGAGGAAGAATCCTTGGGACAGGTGACCGACCAGGTGGAGGTGAATGCC
CAGAACAGTGTGCTGACGAGGAGGCCAAGACAACACCACAAACTCAAGTGGAAAGGGATGATGAGG
CCGCATTCTGGAGCGCTGGCTCGGCGTGAGGAAAGACGCCAAAAACGCCTTCAGGAGGCTCTGGAGCG
GCAGAAGGAGTTCGACCCAAACAATAACAGATGCAAGTCTGTGCTCCCAAGCAGAAGAATGCAAAATGAC
ACAGCAGAAAAAGAACTACCGAGAAGGAAGAAAAAGTAAAGTGCCTAAGAAAGATACGAGATAGAGG
AAACAGAAACAGTCACCAAGTCTACCAGAAGAATGATTGGAGGGATGCTGAAGAAAACAAGAAAGAAGA
CAAGGAAAAGGAGGAGGAGGAAGAGGAGAAGCCAAAGCGAGGGAGCATTGGAGAAAATCAGGGAGAAGAG
AAGGGAACATAAGTCAAGCTAAAAGAGAAAAGCTCCAAGAAGACAAGCCTACCTTCAAAAAAGAAGAGA
TCAAAGATGAAAAGATTAAGTCCGAGAATGGAGAATTCATGACCCACAAACTTAAACATACTGAGAATACT
TTCAGCCGCCCTGGAGGGAGGGCCAGCGTGACACCAAGGAGGCTGAGGGCGCCCCCAGGTGGAAGCCG
GCAAAAAGGCTGGAGGAGCTTCGTGCTGTCGCGGGGAGACCGAGAGCGAAGAGTTCGAGAAGCTCAAACA
GAAGCAGCAGGAGGCGGCTTTGGAGCTGGAGGAACTCAAGAAAAAGAGGGAGGAGAGAAGGAAGTCTG
GAGGAGGAAGAGCAGAGGAGGAAGCAGGAGGAAGCCGATCGAAAACCTCAGAGAGGAGGAAGAGAAGGGA
GGCTAAAGGAAGAGATTGAAAGGCGAAGAGCAGAAGCTGCTGAGAAACGCCAGAAGATGCCAGAAGATGG
CTTGTCAGATGACAAGAAACCTTCAAGTGTTCCTCACTCTAAAGTTCATCTCTCAAGATAGAAGAGCGA
CCAGAATTTTTGAATAAGTCTGTGCAGAAAAGTGGTGTCAAATCGACCCATCAAGCAGCAATAGTCTCCA
AGATTGACAGCAGACTGGAGCAGTATACCAGTGAATTGAGGGAACAAAAAGCGCAAAACCTACAAGGCC
GGCAGCCTCGGATCTTCTGTTCTGCTGAAGGTGTACGCAACATCAAGAGTATGTGGGAGAAAAGGGAAT
GTGTTTTCATCCCCACTGCAGCAGGCACACCAATAAGGAACTGCTGGCTTGAAGGTAGGGGTTTCTA
GCCGCATCAATGAATGGCTAACTAAAACCCAGATGGAACAAGTACCTGCTCCCAAACCTTCTGACTT
GAGACCAGGAGACGTATCCAGCAAGCGGAACCTCTGGGAAAAGCAATCTGTGGATAAGGTCACTTCCCC
ACTAAGGTTTGA
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_033157 unedited

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GGCAGCAGCGCCTGCTTGTCTCTGGCTGTGCTCCTGCTTAAAGAAATCAGTCTTCTCCT
TCCGACTTAGTCTCGGGAAGAAGTTTCAGACTACAAGGTATCATTGGAACATTTCAAGA
TCATCAAATCAAATTCACAGGGATTGGTGACCAACCAGAAGGCTCAGACATCTGATTGC
TGACCTGTCCAGACATCATCTGGTCTCCCTGAACCTGAAATCACACCATGGATGATTTTG
AGCGTCGCAGAGAACTTAGAAGGCCAAAAGAGGGAGGAGATGCGACTCGAAGCAGAAAGAA
TCGCCTACCAGAGGAATGACGATGATGAAGAGGAGGCAGCCCGGGAACGGCGCCGCGAG
CCCGACAGGAACGGCTGCGGCAGAAGCAGGAGGAAGAATCCTTGGGACAGGTGACCGACC
AGGTGGAGGTGAATGCCAGAACAGTGTGCTGACGAGGAGGCCAAGACAACCACCAAA
ACACTCAAGTGAAGGGGATGATGAGGCCGATTCTGGAGCGCTGGCTCGGCGTGAGG
AAAGACGCCAAAAACGCCTTTCAGGAGGCTCTGGAGCGGCAGAAGGAGTTCGACCCAAACA
TAACAGATGCCAGTCTGTGCTCCCAAGCAGAAGAATGCAAAATGACACAGCAGAAAATG
AAACTACCGAGAACGAAGAAAAAAGTACAGTCCGCCAGGAAAGATCCGAGATAGAGGAA
ACAGAAAACAGTACCAGTCTACANAANAATGATTGGAGGGATGCTTGAAGAACCGGAA
GAGGACAGGGAT
    
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_033157 unedited TTAGCTCTGNNACCGCGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTGCAGGA AGGAATTCATTATTGTGGATGCATTTTCACAATATATGTTTATTGGAGCGATCCATTA TCAGTGAAAAGTATCAAGTGTATAAAAATTTTAGGAATGGCAGATTACAGAACATGC TAGTCAGCTTGCAGTTTTACCTCGTAAAGATAACAGAGAATTATAGTCAAACAGTAAAC AAGGAATTTACTTTTTAAAAGATTAAATCCAAACTGAACAAAATCTACCCTAAAACCTTA CTCCATCCAAATATTGGAATAAAAGTCAGCAGTGACACATTCTCTTGTAACCTTTAGATT TTTTAGAAAATATGTAATAGTGATCAGGAGGCGCTCTTGTTCAAAGTACAACAAGCA ATGTTACCTTACCATAGGCCTTAATTCAAACCTTGATCCATTCCACTCCAATGACGGGAG CCAATGTACCTGGGACACTTGTATTTGCAAATCTGATTCACCTATTGTACACTTGTG CCTACTTTGCCACGAGGGCCCGCCTTCTGCACCCTTTTTGGCTTCTTTCTTTTGCCTTC AGTCTGCCAAAGCCCTAACACTCCCGCTCTTCTACAACCTCATCAGGCCGCTTTATTTT GTTCCGCATATGTTCTCCCATGACCTTCTGCGCTGTTTCTTTTCTTTGCCCCCCC TTCGCTTCCACACCCCTTTTTCGCCGGTCTCCCTTTTGTCCCCCTCTTTCTACCC ACCCCTTCTCTTTCTTTCTCTCGCCCTCTTTTTCCCTCCCCCGGTTTTCTCTCC TCCTCTCCCCCACTCTTTTTCTCTCCCTTTGCCCCGACCCCTCCCCCGGCTCTC ACCTACTCTCGCCCTCCCTCTCCCCACGTTGTCTCGTTCTCTCCCTATCCCTCCAC CCT
Restriction Sites:	NotI-NotI
ACCN:	NM_033157
Insert Size:	4470 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_033157.2</u> , <u>NP_149347.1</u>
RefSeq Size:	4546 bp
RefSeq ORF:	1695 bp
Locus ID:	800
UniProt ID:	<u>Q05682</u>
Cytogenetics:	7q33
Domains:	Caldesmon

Protein Pathways: Vascular smooth muscle contraction

Gene Summary: This gene encodes a calmodulin- and actin-binding protein that plays an essential role in the regulation of smooth muscle and nonmuscle contraction. The conserved domain of this protein possesses the binding activities to Ca(2+)-calmodulin, actin, tropomyosin, myosin, and phospholipids. This protein is a potent inhibitor of the actin-tropomyosin activated myosin MgATPase, and serves as a mediating factor for Ca(2+)-dependent inhibition of smooth muscle contraction. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (3) uses two alternate in-frame splice sites in the central coding region, compared to variant 1. It is mainly expressed in non-muscle tissues or cells. The resulting isoform (3, also known as WI-38 I-CaD I) is shorter than isoform 1.